Amendments to the Claims

1.-15. (Canceled)

16. (currently amended) A method to initialize one or more error buffers associated with an array of pixels for a monochrome digital image reproduction system, comprising:

generating a set of multiple random seed values from a random number generator independently of any image information associated with the array of pixels for initializing the error buffers and for use as initial error values when starting an error diffusion operation including generating random seed values associated with a first set of the array of pixels to be printed for a digital image;

adjusting each of the random seed values from the random number generator such that the adjusted random seed values associated with the array of pixels are relatively large, likely to cause a dot to be printed and increase the likelihood that dots will be printed sooner when a transition occurs between a zero image region and a nonzero image region; and

initializing the error buffers associated with the array of pixels with the set of adjusted random seed values that were generated independently of any image information associated with the array of pixels prior to starting the error diffusion operation for reducing startup transients during the error diffusion operation including initializing a first set of the error buffers associated with the first set of the array of pixels to be printed for the digital image with adjusted random seed values that were generated independently of any image information and prior to the starting of the error diffusion operation.

17. (canceled)

18. (currently amended) A method to initialize error buffers in a color digital image reproduction system, comprising:

generating a first set of random seed values used as initial error values for starting an error diffusion process for a first color plane;

generating a second set of random seed values so as to negatively correlate the second set of seed values with the first set of random seed values for a second color plane;

generating a third set of random seed values for a third color plane;

adjusting each of the random sets of seed values for each of the first, second and third color planes such that all of the random seed values are relatively large to increase the likelihood that dots will be printed sooner when a transition occurs between a zero image region and a nonzero image region; and

populating error buffers for each of the color planes with the random sets of seed values prior to starting the error diffusion process for reducing startup transients during the error diffusion operation.

19. (previously presented) The method of claim 18, generating at least one set of seed values from a first constant.

20. (previously presented) The method of claim 19 including generating a second set of seed values from a second constant and then altering the seed values to negatively correlate to the first set.

21. (previously presented) The method of claim 20 including generating a third set of seed values from a third constant different from the first and second constants.

22. (previously presented) The method of claim 18 including performing a negative correlation from the first set of seed values to form the second set of seed values.

23. (previously presented) The method of claim 22 including multiplying the first set of seed values by a negative number to form the second set of seed values.

24. (currently amended) A method to initialize error buffers in a digital image reproduction system, comprising:

generating two separate independently generated random numbers from a random number generator;

generating a first normally distributed variable from the two numbers;

generating a first set of seed values from the first normally distributed variable for use as initial error values for starting up an error diffusion process;

generating a second normally distributed variable from the two numbers that is negatively correlated with the first normally distributed variable ;

generating a second set of seed values for using as initial error values for starting up the error diffusion process from the second normally distributed variable;

generating a third normally distributed variable from the two numbers that is negatively correlated with the first normally distributed variable and the second normally distributed variable;

generating a third set of seed values for using as initial error values for starting up the error diffusion process from the third normally distributed variable; and

initializing the error buffers with the first, second, and third set of ~~selected~~ seed values prior to starting the error diffusion operation.

25. (previously presented) The method according to claim 24 wherein the first normally distributed variable X_1 is generated according to the following:

$$X_1 = \sqrt{-2\ln R_1}\cos(2\pi R_2);$$

where the second normally distributed variable X_2 is generated according to

$$X_2 = \sqrt{-2\ln R_1}\cos(2\pi(R_2 - 1/3));$$

the third normally distributed variable X_3 is generated according to

$$X_3 = \sqrt{-2\ln R_1}\cos(2\pi(R_2 - 2/3)); \text{ and}$$

R_1 and R_2 are independent random numbers uniformly distributed on a unit interval.

26. (New) The method according to claim 24 including adjusting each of the first, second, and third set of seed values by selecting only the seed values with relatively large values with

respect to other seed values such that all of the adjusted seed values have a relatively large value, likely to cause a dot to be printed and increase the likelihood that dots will be printed sooner when a transition occurs between a zero image region and a nonzero image region.

27. (New) The method according to claim 16 including initializing multiple different error buffers associated with multiple different pixels in the array with the set of multiple adjusted random seed values prior to starting any error diffusion operations.

28. (New) The method according to claim 16 including loading the random seed values in the error buffers by selecting only the random seed values with relatively large values such that all of the adjusted random seed values associated with the array of pixels have relatively large values compared with the other random seed values and initializing the error buffers associated with the array of pixels only with the set of adjusted relatively large random seed values.

29. (New) A method for initializing multiple error buffers associated with an array of multiple different pixels for printing a digital image, comprising:

generating a set of multiple different random seed values from a random number generator independently of any image information associated with the array of pixels and independently of any error diffusion values associated with any of the pixels including generating random seed values associated with a first set of the array of pixels to be printed for a digital image;

initializing the multiple different error buffers for use as an initial set of error values for the array of multiple different pixels prior to starting any error diffusion operation;

initializing the multiple different error buffers associated with the array of multiple different pixels with the set of multiple different random seed values that were generated independently of any image information associated with the array of pixels prior to conducting any error diffusion operation on any of the multiple pixels including initializing a first set of the error buffers associated with the first set of the array of pixels to be printed for the digital image with adjusted random seed values that were generated independently of any image information and prior to the starting of the error diffusion operation; and

using the multiple different random seed values during a subsequent error diffusion operation on the multiple pixels including the first one of the pixels printed in the image.

30. (New) The method according to claim 29 including loading the multiple different random seed values into the multiple different error buffers during a system initialization and power on stage prior to any image printing or error diffusion operations.